SITUATION REPORT
INCIDENT COMMAND POST GOLD KING
GOLD KING MINE RELEASE INCIDENT
U.S. ENVIRONMENTAL PROTECTION AGENCY

EPA Contractor sampling sediment along the Animas River near Durango, Colorado.

Subject:	**EXECSUM / SITREP #36** **Gold King Mine Release Incident** **San Juan County, Colorado** **Latitude: 37.8945 Longitude: -107.6384**
From:	Situation Unit, Incident Command Post Gold King
Date:	16 September 2015
Reporting Period:	0700 15 September 2015 through 0700 16 September 2015
Website:	www.epa.gov/goldkingmine

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EXECUTIVE SUMMARY

Situation Summary

United States Environmental Protection Agency (U.S. EPA) Incident Command Post Gold King (ICPGK) is comprised of U.S. EPA Regions 8, 6 and 9.

Highlights, Key Updates/Changes

- ICPGK continues to monitor relations with the Navajo Nation.

Objectives

- Ensure health and safety of the public and responders.
- Continue implementation of private well sampling and water deliveries.
- Establish strategy for MCL-exceeded private wells.
- Continue coordination with Federal, State, Tribal and local stakeholders.
- Continue management of mine water discharge.
- Continue mine dump and portal stabilization.
- Assess sediment impacts.
- Identify incident end points.
- Implement river alert and notification plan during mine site operations.
- Explore real time monitoring options.
- Continue water and sediment sampling along the Animas and San Juan Rivers.
- Evaluate need for delivery of feed for livestock on Navajo Nation.

Command Emphasis

For the next operational period, the ICPGK command emphasis will be:

- Safety of responders and the public
- Visitors to the mine site are required to go through a safety briefing.
- Incident personnel entering Southern Ute Tribal (SUT) lands must be escorted by a SUT member.
- All sampling operations in Navajo Nation must be conducted with law enforcement escort.
- Ensure information flow between ICP and Stakeholders is transparent.

The metrics provided in this Situation Report represent quantities reported for work completed on 15 September 2015. Press releases are presented in Attachment 1. Metrics table cells and report text highlighted in yellow represent a change/addition from the previous day's Situation Report.

1.0 BACKGROUND

The Gold King Mine (GKM) near Silverton, Colorado is a historic gold mine at an elevation of approximately 11,300 feet above mean sea level. The mine discharge includes acidic mine drainage that is a contributor of heavy metals into the Cement Creek drainage of the Animas River watershed. The GKM workings have been inaccessible since 1995 when the mine portal collapsed.

On 5 August 2015, an estimated volume of up to three million gallons of water containing sediment and dissolved metals was suddenly released from the Gold King Mine adit. This water discharged into Cement Creek which feeds into the Animas River, and eventually flows into the San Juan River.

The ICPGK (located in Durango, Colorado) continues to assess and mitigate effects from the release. The U.S. EPA continues daily sampling of surface water and sediment from the Animas River, San Juan River and Cement Creek. Additionally, U.S. EPA continues to schedule sampling of private wells within an alluvial area surrounding the Animas River.

2.0 OPERATIONS

2.1 Mine Operations

A summary of mine operations is presented below.

- Mine operations are utilizing USCG Strike Team personnel to monitor incoming calls, emails and radio traffic.
- Lime addition is ongoing (8 lbs every 9 min).
- Automated lime hopper is being used to dispense lime.
- Diverting Gold King Mine water to the Red and Bonita (R&B) settling ponds.
- Monitoring of treatment process at 5 locations twice daily.
- Average flow rate of approximately 559 gallons per minute (gpm). Pre-treatment pH of 3.49 at Gold King Mine adit portal, and post-treatment pH of 5.32.
- Preparations are being made to install Shot-crete at the mine entrance to stabilize materials in and around the adit / portal.
- Continued construction of the Gladstone settling ponds number 1 through 4.

A “Notification Only” Alert Level per the “Gold King Mine Stakeholders Alert and Notification Plan” was issued at 10:50 am on 15 September 2015. This alert level is for “an identified non mine-site related event affecting Cement Creek or the Animas River that will not pose a physical or safety concern for the downstream users, but may be perceived as a negative event by stakeholders, public, or the media.”

The EPA Gold King Mine Site Team noticed a small amount of turbidity in Cement Creek in the vicinity of the Gold King Mine operations. It was unclear to operations personnel if the turbidity was due to crews moving diversion system piping or due to recent rainfall on Cement Creek. Turbidity is generally the result of particles within the water such as clay, silt, finely divided inorganic and organic matter, algae, microscopic organisms or, near mines, precipitated metals.

It is unlikely that the turbidity remained in the river for any significant distance and would not be a concern or risk to any downstream users such as the Navajo Nation.

2.2 River Sampling

Operational activities for surface water and sediment sampling are summarized below. Sample quantities are based on the SCRIBE database, and include field samples and quality assurance/quality control (QA/QC) samples.

Table 1 - Operations Sampling Summary

Matrix	U.S. EPA Region	Qty. (15 Sep 2015)	Qty. (Cumulative)
Surface Water Samples	8	7	481
	6	9	429
	9	6	262
	Total	**22**	**1,172**
Sediment Samples	8	7	236
	6	9	433
	9	6	208
	Total	**22**	**877**

2.3 Private Wells / Mitigation / Water Tanks

2.3.1 Private Wells

Operational activities for private drinking water well sampling are summarized below.

The assessment focus area for private drinking water wells in Region 8 includes those private drinking water wells located within 300 feet of the banks of the Animas River (including connected canals), between Baker's Bridge and the Colorado/New Mexico state line. The assessment focus area for private drinking water wells in Region 6 includes those private drinking water wells located within 500 feet of the banks of the affected waterways (Animas River, San Juan River and connected canals) within the Animas River watershed in New Mexico. There has been no sampling of private drinking water wells in U.S. EPA Region 9.

Private well samples that have metals concentrations greater than the Maximum Contaminant Levels (MCLs) and were collected from private drinking water wells during the first sampling event were sampled a second time to confirm the analytical results. In Region 8, the second round of samples at a given property were collected from the tap. Residents that have MCL exceedances have been notified.

For Region 6 there was one private drinking water well, which had a primary MCL exceedance. The well exceeded the MCL for lead, and after further assessment by the State of New Mexico and EPA it was determined that the exceedance was unrelated to the GKM incident.

A summary of private drinking water well sampling is presented below.

Table 2 – Private Drinking Water Well Sampling Summary			
Matrix	U.S. EPA Region	Qty. (15 Sep 2015)	Qty. (Cumulative
Private Drinking Water Well **Samples** Collected (from SCRIBE, includes QA/QC samples)	8	0	398
	6	1	286
Private Drinking Water Well **Locations Inside Focus Area**	8	0	55
	6	1	121
Private Drinking Water Well **Locations Outside Focus Area**	8	0	269
	6	0	0

Table 3 – Private Drinking Water Well Primary MCL Exceedances			
Matrix	U.S. EPA Region	Qty. (15 Sep 2015)	Qty. (Cumulative)
Within Focus Area: Private Drinking Water Wells Containing Contaminant Concentrations Above MCLs during Second Sampling Event	8	0	3
	6	0	1*
Outside of Focus Area: Private Drinking Water Wells Containing Contaminant Concentrations Above MCLs during Second Sampling Event	8	0	2
	6	0	0

*Note: One well in Region 6 exceeded the MCL for lead and after further assessment by the State of New Mexico and EPA, it was determined that the exceedance was unrelated to the GKM incident.

Private water well sampling in U.S. EPA Region 6 was completed on 27 August 2015. With the exception of one private water well sample collected on 15 September 2015, private water well sampling is no longer ongoing in U.S. EPA Region 6.

2.3.2 Water Mitigation

No public water systems are currently affected by the release or response operations.

U.S. EPA purchased 1,232 cases of bottled water to supply the community. Public support activities completed are summarized below.

Table 4 - Public Support Summary							
		15 Sep 2015			Cumulative		
Activity	Entity	Deliveries (each)	Qty. (gal)	Qty. (hay bales)	Deliveries (each)	Qty. (gal)	Qty. (hay bales)
Potable Water Deliveries	US EPA R8	0	0			62,000	
Livestock / Agricultural Water Deliveries	US EPA R8	0	0		47	141,980	
	US EPA R6				59	1,104,990	
	US EPA R9	0	0		13	218,400	
	BIA*	0	0		7	975,888	
Agricultural Food Deliveries	US EPA R6				1		244
	US EPA R9	0		0	15		5,760

*Note: BIA- Bureau of Indian Affairs delivered non-potable water to seven locations in the Navajo Nation from approximately 12 August 2015 to 31 August 2015.

On 7 September 2015, U.S. EPA received a request for hay deliveries from the Navajo Nation. On 9 September 2015, U.S. EPA delivered 384 bales of hay to the Upper Fruitland chapter. Three deliveries of hay (384 bales each) are scheduled for Friday, 18 September 2015, and one hay delivery is scheduled for Monday, 17 September 2015.

Bulk water delivery in Region 8 has been discontinued. Bottled water was also provided to **3** residences in Region 8. The Region 6 agriculture and livestock team demobilized on 20 August 2015. There have been no potable water deliveries by the U.S. EPA in Regions 6 and 9; nor agricultural food deliveries by U.S. EPA in Region 8.

The Southern Ute Indian Tribe (SUIT) has delivered drinking water and stock water to tribal members within the Reservation boundary. Approximate volumes to-date include:

- 100 cases of bottled water
- 18 water dispenser units and 42 – five-gallon water containers (210 gallons total).
- 8,000 gallons of bulk water deliveries (there have been no new requests in the past two weeks)

SUIT Tribal Housing Services completed the installation of 14 RO filtration systems at potentially impacted tribal residences.

The Bureau of Indian Affairs (BIA) provided the water to the Navajo Nation for livestock and agricultural use. A summary of the metrics is provided below:

- From 12 August to 31 August 2015, BIA delivered a total of approximately 975,888 gallons of water to seven stations located throughout Navajo Nation.
- The seven stations that received water were designated as follows: Upper Fruitland, Shiprock, Gadii Ahi, Teec, Aneth, Pt/Mexican Water and Monument Valley:
- For the seven locations, BIA serviced an average of 28 clients per day per location.

2.3.3 Other Mitigation Activities

On 9 September 2015, U.S. EPA completed sediment removal activities in two settling ponds for a fish

farm along the Animas River.

2.3.4 Water Tank Assessment & Demobilization

On or about 15 August 2015, 15 black steel tanks were delivered by the ERRS contractor to certain locations on the Navajo Reservation as part of the response to the Gold King Mine (GKM) Site. Each of these tanks is reported to have a capacity of 16,500 gallons. The Bureau of Indian Affairs (BIA) delivered water to these tanks. Metrics for water volumes are provided in Table 4 above.

On 19 August 2015, two tanks at the Upper Fruitland location were removed by the ERRS contractor. On 3 September 2015, the OSC and START conducted an assessment on 11 of the tanks. On 4 September 2015, five additional tanks were demobilized by the ERRS contractor.

3.0 PLANNING

3.1 Environmental Unit

No Updates.

3.2 Resources

The table below summarizes staffing numbers for the federal entities and agencies active in the response.

Table 5 - Personnel On-Site

Region	Agency / Entity	Number of Personnel (15 Sep 2015)
Mine	U.S. EPA	4
	U.S. Coast Guard	6
	U.S. EPA Contractors	20
	U.S. Geological Survey	0
	Visitors	1
ICPGK	U.S. EPA	30
	U.S. EPA Contractors	15
	USCG	1
	Other Federal, State, Local and Tribal Entities	2
6	U.S. EPA	0
	U.S. EPA Contractors	6
	USCG	0
	Other Federal, State, Local and Tribal Entities	0
9	U.S. EPA	1
	U.S. EPA Contractors	2
	USCG	0
	Other Federal, State, Local and Tribal Entities	0
	Total	**87**

No unmet critical resource needs reported.

4.0 FINANCE

4.1 Estimated Response Costs to Date

The table below summarizes estimated costs for the response.

Table 6 - Estimated Response Costs Reported as of 15 September 2015

Region	U.S. EPA * Cumulative Expended Payroll	U.S. EPA Cumulative Expended Travel	U.S. EPA Cumulative Other Charges	U.S. EPA Cumulative Contractors Cost	Total Cumulative Costs
8	$956,962	$205,113	$46,109	$3,199,364	$4,407,548
6	$542,729	$136,150	$12,989	$2,612,863	$3,304,731
9	$560,400	$86,000	$0	$2,047,750	$2,694,150
TOTAL	$2,060,091	$427,263	$59,098	$7,859,977	**$10,406,429**

4.2 Estimated Burn Rates

The table below summarizes current estimated burn rates for the response.

Table 7 - Estimated Daily Burn Rates

U.S. EPA Region	Estimated Daily Burn Rate (as of 15 Sep 2015)
8	$131,920
6	$43,145
9	$157,820
Total	**$332,885**

5.0 LOGISTICS

As of 13 September 2015, the following overhead personnel needs remain to be filled:

- Planning Section Chief to replace current Planning Section Chief by 0700, 25 Sep 2015

6.0 SAFETY

Safety re-organized and requested from previous Safety Officers the most current version of the hard and electronic copies of Health and Safety related documentation. Safety also reviewed the Medical Plan (i.e. ICS 206-CG) and confirmed phone numbers, addresses, and capabilities of each listed medical aid stations, transportation companies, and hospitals identified in the document.

Wording on the Scope of Work for Coast Guard was changed to include verbiage on safety oversight.

No recordable injuries or illnesses reported.

ICPKG has a Critical Incident Stress Management (CISM) program for personnel involved with the response. On 15 September 2015, the CISM office at the ICPGK command post received **5** contacts from response personnel. As of 15 September 2015, the CISM center has received **254** visits.

7.0 PUBLIC INFORMATION

7.1 Community Engagements

No community engagements were conducted on 14 September 2015. A summary of community engagements is provided below:

Table 8 - Community Engagement Summary

Description	U.S. EPA Region	Qty. (15 Sep 2015)
Community Engagements	8	0
	6	0
	9	0

7.2 Anticipated Events: VIPs/Congressional Visits and Public Events

Known site visits and public events for the next 14 days are summarized below.

Table 9 - Anticipated Site Visits and Public Events Summary

Planned Event	Anticipated Date
None Scheduled	N/A

7.3 Community Relations Branch

Effective 27 August 2015, calls to the Regional Call Center (970-385-8700) regarding the Gold King Mine Release Incident are being directed to the National Call Center (844-607-9700). The National Call Center is now being operated by U.S. EPA Headquarters. A total of **809** calls were received at the Regional Call Center during its operation by former Area Command (AC). A total of **223** calls were received at the National Call Center during its operation by AC, this included **120** calls related to Region 8, **67** calls related to Region 6 and **38** calls related to Region 9.

8.0 LIAISON

Federal, regional, local and other entities participating in the response are summarized below.

U.S. EPA
U.S. Coast Guard (USCG)
U.S. Geological Survey (USGS)
U.S. Army Corps of Engineers (USACE)
U.S. Bureau of Reclamation (USBOR)
U.S. Fish and Wildlife Services (USFWS)
Colorado Office of Emergency Management (OEM)
Colorado Department of Public Health and Environment (CDPHE)
New Mexico Environment Department (NMED)
New Mexico (NM) Department of Health
NM Office of the State Engineer

NM Department of Game and Fish
State of Utah
State of Arizona

City of Durango
La Plata County
San Juan County
San Juan Basin Health Department
County of San Juan – New Mexico

Southern Ute Indian Tribe (SUIT)
Navajo Nation

9.0 SOURCE OF ADDITIONAL INFORMATION

For additional information, refer to www.epa.gov/goldkingmine .

ATTACHMENT 1
PRESS RELEASE

Menu

EPA United States Environmental Protection Agency

Related Topics: Emergency Response to Gold King Mine Release

Gold King Mine Data, September 15, 2015

Free viewers may be needed to access information linked on this page.

Data from Gold King Mine Response

EPA sediment samples collected on 9/7 through 9/9 from locations along the Animas and San Juan Rivers.

EPA has reviewed the data which includes comparison to screening levels for exposure during recreational use. The metal concentrations of the samples are below sediment/soil recreational screening levels, and are being maintained at pre-event conditions. Based on previous monitoring events it has been shown that metal concentrations may fluctuate from time to time because of water surges due to heavy rains or other events that may change the water flow rates or volume.

- Open or download the data file: Region 6 Sediment Summary Table 091302015 (XLSX) (1 pg, 116 K)

EPA surface water samples collected on 9/7 through 9/9 from locations in the Animas and San Juan Rivers.

EPA has reviewed the data which includes comparison to screening levels for exposure during recreational use. The metal concentrations of the samples are below surface water recreational screening levels, and are being maintained at pre-event conditions. Based on previous monitoring events, it has been shown that metal concentrations may fluctuate from time to time because of water surges due to heavy rains or other events that may change the water flow rates or volume.

- Open or download the data file: Region 6 Surface Water Summary Table 09132015 (XLSX) (1 pg, 146 K)

Last updated on September 15, 2015